

REMARKS

The Office Action dated July 3, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Following the current amendment, claims 1-2, 4-18, and 20-64 are currently pending for consideration, of which claims 1, 2, 4, 18, 20, and 35-37 are independent. . In particular, Applicants amend claims 1-2, 4-18, 20-34, add new claims 35-64, and cancel claims 3 and 19 without prejudice or disclaimer. It is respectfully submitted that the amendment adds no new subject matter to the present application and serves only to place the present application in better condition for examination. Therefore, entry of the amendment and reconsideration of the rejected pending claims are respectfully requested. It is believed that all grounds for rejection in the Office Action have been addressed and that the present application is currently in condition for allowance in view of the amendment and the following arguments. Reconsideration of claims 1-2, 4-18, and 20-64 is respectfully requested.

Objection to the Claims

Beginning at page 9, the Office Action objected to claims 1-2, 14, 18, and 30 for containing informalities. In particular, the Office Action objected to the phrases “signal classwise” and “quality classwise.” Applicants have carefully reviewed the claims and herein amend the claims to clarify the subject matter recited therein, including the claim

aspects objected to in the Office Action. Applicants respectfully suggest that all grounds for the objection to claims 1-2, 14, 18, and 30 have been addressed in the current amendment, and that this objection is now, therefore, moot at this time. Accordingly, withdrawal of the objection and reconsideration of claims 1-2, 14, 18, and 30 are respectfully requested.

Rejection of the Claims under 35 U.S.C. §112, Second Paragraph

Beginning at page 8, the Office Action rejected claims 1-2, 6, 13-14, 22, and 29-30 for containing informalities, generally related to antecedent basis problems. Applicants have carefully reviewed these and the other claims and herein amend the pending claims to clarify the subject matter recited therein, including the claim aspects objected to in the Office Action. Applicants respectfully suggest that this formal rejection of claims 1-2, 6, 13-14, 22, and 29-30 has been addressed in the current amendment. Accordingly, withdrawal of the rejection and reconsideration of claims 1-2, 6, 13-14, 22, and 29-30 are respectfully requested.

Rejection of the Claims under 35 U.S.C. §102(e)

Beginning at page 2, the Office Action rejects claims 1-2, 5-18, and 21-34 as being allegedly anticipated by U.S. Published Patent Application No. 20040106417 of Schieder et al. (the “Schieder” reference). According to the Office Action, Schieder discloses all recitations of these claims. However, as will be discussed below, each of the

pending claims currently recites subject matter which is neither disclosed nor suggested in Schieder. Applicants respectfully traverse this rejection and request that this rejection be withdrawn in view of the current amendment and the following arguments.

Claim 1, from which claims 5-17 depend, has been amended to recite a method including the steps of first determining for different nodes of a circuit arrangement one or more predetermined operations to execute, and second determining one or more division criteria for signal classes for dividing signals or signal components. Then, the method continues with dividing at least one of the signals or signal components according to the one or more division criteria for the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes. The circuit arrangement is at least substantially in accordance with a combined tree structure, where at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner.

Independent claim 2 recites a method that includes first determining for different circuit arrangement nodes at least one operation to execute and selecting a modification level from the circuit arrangement, and then merging together nodes in the selected modification level and deleting irrelevant nodes and links between the nodes and/or adding new links. The recited method of claim 2 further includes second determining one or more division criteria for signal classes for dividing the signals or signal components, and dividing at least one of the signals or signal components

according to the one or more division criteria for signal classes. Then, the determined operations in the circuit arrangement nodes are executed according to the signal classes.

Independent claim 4, from which claims 38-50 depend, recites a method including the steps of first determining for different nodes of a circuit arrangement one or more predetermined operations to execute, and second determining one or more division criteria for signal classes for dividing signals or signal components. Then, the method continues with dividing at least one of the signals or signal components according to the one or more division criteria for the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes. The circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, where at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

Independent claim 18, from which claims 21-34 depend, includes nodes arranged to perform at least one operation and a dividing unit configured to divide at least one signal or signal components according to one or more predetermined division criteria for signal classes. A performing unit performs predetermined operations according to the signal classes. The apparatus is configured substantially in a combined tree structure, where at least one first tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and where one or more nodes of different branches is are connected in a predetermined manner.

Independent claim 20, from which claims 51-64, includes nodes arranged to perform at least one operation and a dividing unit configured to divide at least one signals or signal components according to one or more predetermined division criteria for signal classes. A performing unit performs predetermined operations according to the signal classes. The apparatus is configured substantially in a centralized loop such that at least two subtrees are connected to the loop, where at least one first subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

Independent claim 35 recites a computer program embodied on a computer readable medium, where the computer readable medium stores code for computer executable instructions that include the steps of first determining for different nodes of a circuit arrangement one or more predetermined operations to execute, and second determining one or more division criteria for signal classes for dividing signals or signal components. Then, the instructions continues with dividing at least one of the signals or signal components according to the one or more division criteria for the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes. The circuit arrangement is at least substantially in accordance with a combined tree structure, where at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner. Alternatively, the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, where at least one subtree performs

tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

In independent claim 36, a recited a circuit arrangement includes nodes arranged to perform at least one operation; wherein said nodes are configured to divide at least one signal or component of said signal according to one or more predetermined division criteria for signal classes and to perform predetermined operations according to the signal classes.

Independent claim 37 recites a first node configured to be arranged with at least one second node to perform at least one operation. The first node is further configured to divide a signal or a component of said signal according to one or more predetermined division criteria for signal classes and to perform predetermined operations according to the signal classes.

Applicants submit that each of the above-noted independent claims recites subject matter that is not taught or disclosed by Schieder.

According to its abstract, Schieder describes:

A method and device for transmitting signals of a first category and signals of a second category over a link, said link providing a predetermined signal transmission rate, where said signals of the first category have a discontinuous characteristic comprising periods of activity and periods of inactivity, where a first channel is provided for carrying signals of the first category and a second channel is provided for carrying signals of the second category, and where the two channels each have respective proportions of the predetermined signal transmission rate of the link during periods of activity of the signals of the first category, and the proportion of the signal transmission rate assigned to the second channel

during periods of inactivity of the signals of the first category is increased with respect to the period of activity.

In this way, Schieder appears to disclose that the operations are discrimination of speech activity/inactivity and placing data for transmission. Then, the nodes are the speech discriminator and the channel management part. Signal classes are speech and data. The operation to be executed signal-classwise is putting data into the voice frames.

Referring now to claim 1, Applicants respectfully submit that Schieder does not teach or suggest every recitation contained therein. In particular, claim 1 has been amended to include the limitations of original claim 3, now cancelled. Claim 1 now recites that the circuit arrangement is at least substantially in accordance with a combined tree structure, where at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner.

As admitted by the Office Action in the discussion of claim 3, Schieder does not relate to circuit arrangements, and the Office Action introduces a secondary reference to overcome this deficiency in Schieder, described in greater detail below. Therefore, claim 1 is now allowable over Schieder. Withdrawal of this rejection of claim 1 and reconsideration of this claim in view of the amendment and arguments are respectfully requested. Likewise claims 5-17 depend from claim 1 and should likewise be allowable over Schieder on similar grounds.

Independent claim 18, although different in scope, contains a similar recitation as claim 1 and should therefore also be allowable over Schieder. Likewise claims 21-34 depend from allowable claim 18 and should likewise be allowable over Schieder on similar grounds.

Referring now the claim 2, Schieder does not disclose the recited limitation of merging selected modification nodes and deleting irrelevant nodes and links. The Office Action at page 2 alleges that Schieder teaches merging selected modification nodes and deleting irrelevant nodes and links on paragraph 0036, but Applicants respectfully disagree with this finding. In particular, Schieder simply teaches that the assignment of data transmission rate to the speech channel and the data channel may be variable during the periods of speech activity, but it is preferable that the assignment is in a fixed proportion. Thus, claim 2 is not anticipated by Schieder. Withdrawal of this rejection of claim 2 and reconsideration of this claim in view of these arguments are respectfully requested.

Referring now to claim 4, Applicants respectfully submit that Schieder does not teach or suggest every recitation contained therein. In particular, claim 4 has been amended in independent form to include the limitations of claim 1. Independent claim 4 recites that the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, where at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

As admitted by the Office Action in the discussion of claim 4, Schieder does not relate to circuit arrangements, and as described above, the Office Action introduces a secondary reference to overcome this deficiency in Schieder. The secondary reference is discussed in greater detail below. Therefore, claim 4 is allowable over Schieder. Withdrawal of this rejection of claim 4 and reconsideration of this claim in view of the amendment and arguments are respectfully requested. Likewise claims 38-50 depend from claim 4 and should likewise be allowable over Schieder on similar grounds.

Independent claim 20, although different in scope, contains a similar recitation as claim 4 and should therefore also be allowable over Schieder. Likewise claims 51-64 depend from allowable claim 20 and should likewise be allowable over Schieder on similar grounds.

In view of the current amendments and the arguments presented herein, reconsideration and allowance of claims 1-2, 5-18, and 21-34 is respectfully requested.

Rejection of the Claims under 35 U.S.C. §103(a)

Continuing with the Office Action at page 6, claims 3-4 and 19-20 are rejected as being allegedly unpatentable over Schieder in combination with U.S. Patent No. 6,771,633 of Mizoguchi (the Mizoguchi reference). In particular, as previously introduced, the Office Action alleges that Schieder discloses all recited elements of claims 3-4 and 19-20 except for the circuit arrangements, but that this deficiency is cured by Mizoguchi. However, as will be discussed below, each of the pending claims 1

(corresponding to claim 3 written in independent form), 4, 18 (Corresponding to claim 19 written in independent form) and 20 currently recites subject matter which is neither disclosed nor suggested in either Schieder or Mizoguchi. Applicants respectfully traverse this rejection and request reconsideration in view of the current amendment and the following arguments.

According to its abstract, Mizoguchi relates to:

If a mobile terminal A requests a call connection to a fixed terminal B which can accommodate a plurality of channels, connection is established between the fixed terminal B and mobile terminal A via one channel. If another slave terminal C requests a call connection to the fixed terminal B, a channel different from one used by the mobile terminal A is used. When establishing the connection to the mobile terminal C, the fixed terminal B issues to the mobile terminal A an instruction to temporarily stop transmitting/receiving information. This allows the mobile terminal to wait for a new instruction while holding its communication session. In this way, the connection between the fixed terminal B and mobile terminal C is established. By shifting the transmission source from the fixed terminal B to the mobile terminal A or C, information obtained by the mobile terminal A or C can be transmitted to the fixed terminal B or other mobile terminals.

In particular, the Office Action at page 6 alleges that Mizoguchi would teach in Figure 9 that the circuit arrangement is at least substantially in accordance with a combined tree structure as claimed in claim 3 of the present patent application.

Applicants respectfully urge that Mizoguchi does not teach or suggests circuit arrangements as recited in claim 1. As can be clearly seen in the Figure 9 and also in the disclosure column 10, lines 48-49, Mizoguchi only teaches a flowchart showing some processes, not a circuit arrangement. Moreover, Mizoguchi does not teach or suggest a tree structure. Thus, Mizoguchi does not cure the deficiency in Schieder.

For at least these reasons, Applicants respectfully suggest that the combination of Schieder and Mizoguchi does not disclose every recited element of claim 1. Therefore, claim 1 is allowable over the combination of Schieder and Mizoguchi. Reconsideration and allowance of claim 1 in view of these comments is respectfully requested. Likewise claim 18, although of different scope, contains similar limitations and is similarly allowable over the combination of Schieder and Mizoguchi. Claims 5-17 and 21-34 dependent, respectively, from claims 1 and 18 and should therefore be allowable as depending from allowable claims.

Regarding claim 4, the Office Action refers to the same figure in Mizoguchi and alleges that Mizoguchi would teach a circuit arrangement at least substantially in accordance with a centralized loop. As stated above, Figure 9 is a flowchart and thus does not teach a circuit arrangement. Moreover, Mizoguchi does not teach or suggest a centralized loop. Thus, Mizoguchi does not cure the deficiencies in Schieder.

For at least these reasons, Applicants respectfully suggest that the combination of Schieder and Mizoguchi does not disclose every recited element of claim 4. Therefore, claim 4 is allowable over the combination of Schieder and Mizoguchi. Reconsideration and allowance of claim 4 in view of these comments is respectfully requested. Likewise claim 20, although of different scope, contains similar limitations and is similarly allowable over the combination of Schieder and Mizoguchi. Claims dependent 38-64, from either of claims 4 or 20 and should therefore be allowable as depending from allowable claims.

Likewise, new independent claims 36 38 should be allowable on similar grounds because, although they are of different scope, the new claims contains similar limitations and are similarly allowable over the combination of Schieder and Mizoguchi.

Accordingly, pending claims 1-2, 4-18, and 20-64 are allowable over Schieder and/or Mizoguchi. Applicants urge that these claims are in condition for allowance. Reconsideration of these claims at this time is respectfully requested.

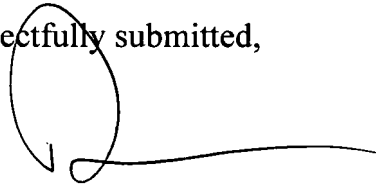
Conclusion

As discussed above, each of the pending claims 1-2, 4-18, and 20-64, including independent claims 1, 2, 4, 18, 20, and 35-37, recites subject matter which is neither disclosed nor suggested in the cited references. Applicants submit that the recited subject matter is more that sufficient to render the invention non-obvious to a person of ordinary skill in the art. It is respectfully requested that independent claims 1, 2, 4, 18, 20, and 35-37 and the related dependent claims be allowed in view of the above arguments, comments, and remarks and that the present application be allowed to pass to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal
Check Nos. 17188 and 17189